The Speed Round: An Activity for Developing Automaticity

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ABSTRACT

This paper reports on an activity that was specifically designed in accordance with the principles of *creative automaticity* (Gatbonton & Segalowitz, 1988) in an attempt to develop the automaticity of a group of students' use of a set of function phrases in an English discussion class. The *speed round* activity was modelled on the 4/3/2 activity (Maurice, 1983) and involved students in competition with each other, and against themselves, to ask and answer as many questions as possible within a short timeframe. The activity proved to be a fun activity for practicing certain target language.

INTRODUCTION

The concept of automaticity is far from clearly defined in academic literature. In language learning, automaticity has been adapted from capacity theory in cognitive psychology research, where it is dependent on the existence of four key processing features – efficient, unintentional, uncontrollable, and unconscious – labelled the four horsemen of automaticity (Bargh, 1994). In second language acquisition (SLA) literature, automaticity has been defined as relating to the automatic processing of language with ancillary attention to language forms, and is founded upon a set of perceived pedagogical benefits, incorporating but not limited to the provision of additional processing resources, increases in performance quality, motivation to use the L2, and fluency improvements (Segalowitz, 2003).

When compiling lists of principles and maxims for foreign language teachers to abide by, researchers inevitably advocate activities that promote automaticity in language learners, but define automaticity with slightly different meanings. R. Ellis (2014) placed automaticity under a principle requiring instruction to primarily address the development of implicit knowledge. Brown (2007) listed automaticity as number one of six cognitive principles for language teaching and focused his definition on the ability to avoid overanalysing the rules and forms of language. Dörnyei (2009) combined automaticity with fluency and reported upon it as being one of three key areas of research in applied linguistics, all three of which are connected with the investigation of the implicit-explicit interface argument. While all three of these authors addressed the same phenomena, each one did so in a slightly different manner. This lack of consensus over the term is also evident in the field of cognitive psychology (Moors & De Houwer, 2006).

DISCUSSION

The most common reference to automaticity in applied linguistics literature is *skill acquisition theory* (DeKeyser, 1998, 2007a), which was adapted from Anderson's (1983) *adaptive control of thought (ACT)* model, and is based upon the assumption that knowledge of language proceeds through three stages along a continuum. Initially, knowledge of a second language consists of *declarative knowledge*, which is stored in the mind as explicit, rule-based memory (R. Ellis, 2008). This stage is characterized by hesitations due to utterances being constructed piecemeal during production. With a relatively small amount of practice, declarative knowledge develops into *procedural knowledge*, whereby practiced utterances are no longer constructed piecemeal, but are retrieved as pre-fabricated chunks of language, and speech performance is characterized by faster, more fluid production. The final stage of the continuum involves the *automatization* of procedural knowledge, which is only attainable through an enormous amount of practice. When knowledge of a language feature becomes automatized, a speaker's spontaneous performance becomes

characterized by complete and effortless fluency as defined in DeKeyser (2007a), while errors in production become scarce. Completely automatized skills are distinguished by being less interruptible due to the task being performed without recourse to the cognitive system, which allows the pursuit of other cognitive goals.

Although R. Ellis (2008) suggested that the terms implicit and explicit memory are interchangeable with procedural and declarative knowledge respectively, the relationship between these concepts is controversial. Other researchers (Anderson, 1982, 1983; DeKeyser 1998, 2003, 2007a) argued that skill-based knowledge does not become implicit knowledge until it has become automatized, whereupon cognitive involvement decreases and the explicit knowledge required to describe the skill can even be forgotten. Whether or not explicit knowledge can ever actually become implicit knowledge is described in terms of the *interface, non-interface,* and *weak interface* positions. The interface position suggests that explicit knowledge can become implicit through practice (Bialystok, 1979; Lee, 2004). The non-interface position suggests that implicit and explicit knowledge are stored separately in the mind and that explicit knowledge can never become implicit (Paradis, 2004). From this perspective, the conversion from declarative knowledge to procedural knowledge can be conceived of as the strengthening of the neural loop associated with declarative knowledge and the weakening of the loop associated with declarative knowledge. The weak interface position acknowledges that implicit and explicit knowledge are neurologically distinct but suggests that through processes such as noticing, explicit knowledge can help facilitate the acquisition of implicit knowledge (N. Ellis, 2005). Neuroscientific research has produced no definite evidence regarding whether or not explicit knowledge can be restructured into implicit knowledge (R. Ellis, 2008), though it has suggested that implicit memory attends to grammar, while explicit memory attends to lexis (Paradis, 2004).

The approach to theory taken by the current study is in line with the weak interface position. Explicit and implicit knowledge are considered as being neurologically distinct, and it is unrealistic that the students using the activity created for this project will develop implicit knowledge of the target phrases that they are being taught from the functional-notional syllabus, particularly in the middle of the second semester when they will only have a handful of weeks attending to the target-language phrases. However, any progress observed from participants using the activity could potentially be framed along the continuum from declarative knowledge, through procedural knowledge, and perhaps even towards automaticity, providing that there is enough opportunity created for practice.

Regardless of whether or not there is evidence of a relationship between explicit and implicit language knowledge, there is no evidence that enormous amounts of practice will not result in automaticity, merely a scarcity that it will (DeKeyser, 2003). Practice has been reported as having an effect on the speed of performance, on the rate of forgetting, and on the strength of interference of secondary tasks under a dual-task condition (Anderson, 1982), all of which relate to tenets of automaticity. But what exactly is meant by practice? DeKeyser (2007b) explained that a term as seemingly simple as practice belies a complexity that can be interpreted differently by researchers from different fields. In cognitive psychology research, the amount of practice needed to develop automatic L2 processing is undefined, with some researchers emphasising the need for massive amounts of repetition by way of consistent repetition (Shiffrin & Schneider, 1977), while others suggest that over 10,000 hours is necessary to attain expertise in any given skill (Ericsson & Charness, 1994). Others, somewhat surprisingly, believe that a mere 16 presentations of a stimulus is a viable amount to achieve automaticity (Logan & Etherton, 1994).

According to DeKeyser (2007b), from an applied linguist's perspective, practice is a concept that is shrouded in questions as it has rarely been researched by practitioners in the field. However, despite the paucity of research into practice, DeKeyser (2007a) listed it as the key

ingredient for the development of explicit knowledge from declarative knowledge, through procedural knowledge, and towards automaticity. For DeKeyser (2007b), practice involves the engagement of learners in systematic activities with a deliberate goal of developing L2 skills and knowledge. DeKeyser is also aware of the rejection of repetitive drills in the applied linguistics field, and admits that mechanical drills are limited in what they can achieve. However, he promotes the practice of language through meaningful drills, which involve attendance to the form-meaning links of an L2, and communicative drills, in which students exchange information, as useful methods of practice in order to develop automaticity. The utilization of meaningful and communicative drills is also in accordance with the general principles of *creative automaticity*, which consist of being (a) genuinely communicative, (b) psychologically authentic, (c) focused on functions that learners will face outside the classroom, (d) formulaic, and (e) inherently repetitive (Gatbonton & Segalowitz, 1988).

For the current paper, automaticity is defined as a stage on the continuum of explicit language knowledge development, which can be beneficial for the facilitation, but not responsible for the development, of implicit language knowledge. In order to develop explicit knowledge along the continuum towards automaticity, practice is vital and can be incorporated through the use of communicative and meaningful drills. Student knowledge of the function phrases will be considered to be moving along the continuum towards automaticity if the phrases are used more frequently. Presumably, if knowledge of the function phrases has developed along the continuum to become proceduralized, the phrases should be more readily available for use in the context in which they were practiced, which in this case is Rikkyo University's English Discussion Class (EDC) classroom, and should occur more frequently in student discussions.

PROCEDURE

An activity called the *speed round* was developed to encourage automaticity of target phrases from a functional-notional syllabus within the context of a small-scale English discussion class. The speed round involves students asking and responding to a set of target-language questions and adheres to the concept of practice in the form of meaningful and communicative drills (DeKeyser, 2007b). It was also designed in accordance with the principles of creative automaticity outlined above (Gatbonton and Segalowitz, 1988). The activity is similar to the *4/3/2* activity for specifically developing learner fluency (Maurice, 1983), whereby students talk about the same topic three times, for four minutes, then three minutes, and finally two minutes.

The speed round was specifically developed for the *balancing opinions* discourse function, which involves students asking for and providing advantages and disadvantages. In the discussion class textbook, there is a practice section which provides students with four practice questions to discuss in pairs, meaning that each student generally has four opportunities to attend to the speaker and listener sides of the function. For example, question one provides the topic of entertainment and asks "Which is better for entertainment – TV or YouTube?" (Brereton, Lesley, Schaefer, & Young, 2017). In a standard lesson, one student will ask the question and the partner will answer, and the first student will ask about advantages and/or, before the roles of speaker and listener are reversed.

In the speed round, the four questions in the practice section were deconstructed to create four, clear questions based upon the target function:

1. For entertainment, what are the advantages of TV?
2. For entertainment, what are the disadvantages of TV?
3. For entertainment, what are the advantages of YouTube?
4. For entertainment, what are the disadvantages of YouTube?

The four practice questions were deconstructed into 16 simple questions and were presented to students on one of two handouts (see Appendix A), which contained the same questions, but presented in different orders. Students worked in pairs and were assigned roles of *student A* and *student B* (see Figure 1). Student A was instructed to read the questions and student B was instructed to answer, with emphasis placed on responses involving the target language. The activity was conducted with a 90-second time limit and the students were instructed to answer as many questions as possible. Once the 90-seconds were complete, the students answering the questions were instructed to move one place along, so B1 became A2's partner, B2 became A3's partner and so on (see Figure 2). The activity was repeated for a second phase with a 75-second time limit, and students were encouraged to answer more questions than in the previous phase. When that phase was complete, the students answering the questions moved along once more and a third phase of the activity was performed with a 60-second time limit. After the third phase finished, the students exchanged roles (see figure 3) so that the question askers became answerers and vice versa. The same three phases were repeated using a different handout, which presented the questions in reverse order (see Appendix A). After the end of each phase, each pair reported how many questions they answered and the results were recorded.

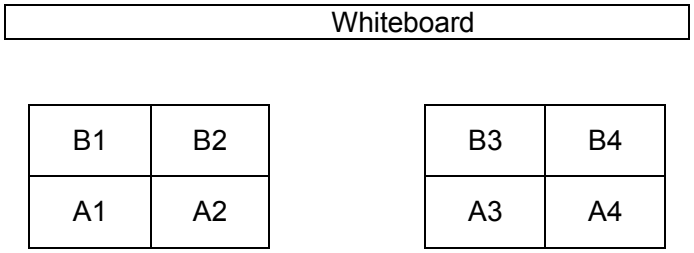

Figure 1. Classroom layout and assigned roles for phase one of the speed round.

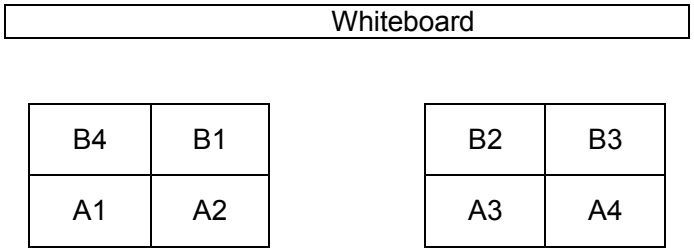

Figure 2. Classroom layout and assigned roles for phase two of the speed round.

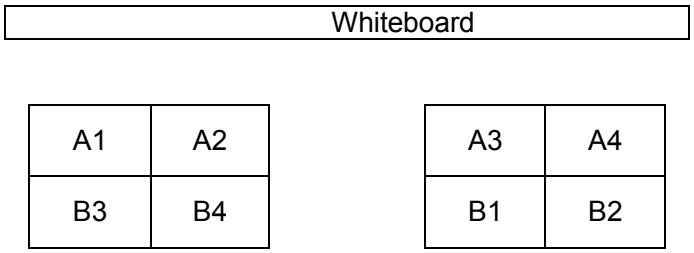

Figure 3. Classroom layout and assigned roles for the start of the second round of the speed round.

VARIATIONS

During the week in which the speed round was utilized, two key variations were made regarding the amount of content produced for each question and the duration of each phase. First, the original plan for the speed round involved an extra layer of questioning. Following the provision of the advantage or disadvantage, the first iteration of the activity involved a follow-up question eliciting the reasoning behind the perceived advantage/disadvantage. I felt that this slowed down the activity too much and resulted in the students using the phrases no more than they would in a standard activity. My aim for this activity was for the students to attend to the target language as many times as possible, and so the reason question was removed from the materials for subsequent iterations.

Second, the original plan for the speed round involved a three-minute first round, a two-minute-second round, and a one-minute final round. Once the reason question was dropped, the three-minute first round was considered too long, as most of the pairs involved in this iteration were close to answering all of the questions in under two-and-a-half-minutes. The next iteration involved a two-minute, 90-second, and one-minute format, which was better, but still felt a little long because some students were completing all of the questions in the second cycle. When the 90-second, 75-second, 60-second format was trialed, the activity felt right because no students answered all of the questions in any cycle. The whole activity became a little more frantic because the seat moving occurred fairly quickly, which seemed to add to student enjoyment.

The speed round is still in its infancy and could be varied in other ways. In the future, the speed round could easily be adapted to the *comparisons* function, which involves choices made upon binary options, such as *Which is better – Star Wars or Star Trek?*

CONCLUSION

The speed round proved to be an enjoyable activity for practicing the function phrases. I thought that the constant moving might have become a little bit tedious for some students, but there was no sign of that in any of the classes in which it was implemented. Whenever I used the activity, including in two cover lessons, the energy levels of the students were noticeably higher than at other points in the lesson. This was probably due to the competition aspect of the activity, whereby students were not only competing against each other to ask and answer the questions, but also with themselves because of the time limit.

Despite my best intentions, there are still limitations to the speed round activity. I have only used the activity in classes with eight or six students and feel that it would be tough to organize in a class with odd numbers. In a class of seven students, the instructor would have to be involved, which means that the class could not be monitored to make sure that the target language is being used at all times. This is problematic because eager students had a habit of dropping the function phrases when replying in order to answer more questions within the time limit, which defeats the purpose of the activity. A class of nine students would entail the same problem, with the additional problem of set-up. Classes with nine students have a different layout, with students generally pooled in three groups of three. Perhaps it would work if the students were standing as they do during a 3/2/1 activity, but then the activity would seem too similar to the 3/2/1, and might annoy some students as they would be standing for a larger amount of the class.

Before the speed round can be promoted as an effective new addition to the list of EDC activities, it needs to be assessed more formally to measure its effectiveness. In order to do this, a group of classes could be assigned to a condition involving the speed round, and a group of classes of similar ability, judged according to scores provided by some sort of standardized language testing instrument, could be assigned to a control condition that uses a more typical EDC activity. The amount of times each student attends to the target language questions and answers could be

tallied and compared. Discussions several weeks later could be recorded using an IC recorder and the use of the target language by the students in each condition could again be compared to see if there is any lasting effect of the speed round. Such research might provide insights that could open up avenues for other variations that have not yet been considered.

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APPENDIX

SPEED ROUND - Balancing Opinions

Student A

E.g. A. For entertainment, what are the advantages television?
B. One advantage is that it is convenient.

1. For entertainment, what are the advantages of television?
2. For entertainment, what are the disadvantages of television?
3. For entertainment, what are the advantages of YouTube?
4. For entertainment, what are the disadvantages of YouTube?
5. For studying, what are the advantages of the library?
6. For studying, what are the disadvantages of the library?
7. For studying, what are the advantages of the internet?
8. For studying, what are the disadvantages of the internet?
9. For communication, what are the advantages of posting letters?
10. For communication, what are the disadvantages of posting letters?
11. For communication, what are the advantages of email?
12. For communication, what are the disadvantages of email?
13. For information, what are the advantages newspapers?
14. For information, what are the disadvantages of newspapers?
15. For information, what are the advantages of online news?
16. For information, what are the disadvantages online news?

SPEED ROUND - Balancing Opinions

Student B

E.g. A. For entertainment, what are the advantages television?
B. One advantage is that it is convenient.

1. For information, what are the advantages online news?
2. For information, what are the disadvantages of online news?
3. For information, what are the advantages of newspapers?
4. For information, what are the disadvantages newspapers?
5. For communication, what are the advantages of email?
6. For communication, what are the disadvantages of email?
7. For communication, what are the advantages of posting letters?
8. For communication, what are the disadvantages of posting letters?
9. For studying, what are the advantages of the internet?
10. For studying, what are the disadvantages of the internet?
11. For studying, what are the advantages of the library?
12. For studying, what are the disadvantages of the library?
13. For entertainment, what are the advantages of YouTube?
14. For entertainment, what are the disadvantages of YouTube?
15. For entertainment, what are the advantages of television?
16. For entertainment, what are the disadvantages of television?